

December 5, 2014

MEMORANDUM

TO: Mr. Zachariah Beasley, P.S., M.S. - Tippecanoe County Surveyor

FROM: David W. Eichelberger, P.E. - CBBEL, Indianapolis
Stephen D. Benagh, CFM, CISEC - CBBEL, Indianapolis

PROJECT: **Soleado Vista Subdivision**
CBBEL Project No. 02-038 (NG)

DEVELOPER/OWNER: **Solbuen, LLC**

LOCATION: **40° 28' 26" Latitude**
-86° 56' 12" Longitude

RECOMMENDATION: **Conditional Approval**

Soleado Vista Subdivision is a planned residential development on approximately 31 acres, located on the east side of Morehouse Road, approximately ½ mile north of Kalberer Road (CR 350 North) in Wabash Township. The development will consist of 71 single-family residences. Under existing conditions drainage is from north to south to the Dempsey Baker Regulated Drain. The project site is located within the Indian Creek Watershed Drainage Impact Area and will be restricted to allowable release rates of 0.05 cfs/ac and 0.11 cfs/ac for the developed 10-year and 100-year storms, respectively. Developed runoff will be routed through storm sewers and vegetative swales to a proposed wet detention basin in the southwest corner of the site and discharge to the Dempsey Baker Regulated Drain. Post construction stormwater quality will be through the use of a wet detention basin and a mechanical stormwater quality unit.

Based on information available to CBBEL, it does appear that a Tippecanoe County Regulated Drain exists at or near the project site. There is a regulated drain easement reduction and encroachment proposed with this development. Stormwater runoff eventually discharges to the Dempsey Baker Regulated Drain, which is tributary to Hadley Lake. . The project site is within the Tippecanoe County MS4 Area, and is not located within a 305(b) Priority Watershed.

This project was previously reviewed in a memorandum dated November 17, 2014. After a review of the most recently provided information, CBBEL recommends approval of the stormwater management plan with the following conditions:

1.0 Variances/Encroachments

1. The applicant has prepared written petitions to reduce the statutory regulated drain easement of the Dempsey Baker Regulated Drain and to encroach within the easement with the final outlet pipe. The applicant should continue to coordinate the reduction and encroachment of the Dempsey Baker Regulated Drain with the Tippecanoe County Surveyor's Office. This reduction will require final approval from the Tippecanoe County Drainage Board.
2. The applicant is requesting variances on the 10-year and 100-year allowable release rates from the site, as well as variances on the detention and channel protection drawdown. The site is located within the Indian Creek Watershed and has restrictive allowable release rates that must be met. The applicant has attempted to balance the proposed release rates and drawdown times to substantially comply with the Technical Standards requirements and the

restrictive release rates. The resultant pond will slightly exceed the restrictive release rates and will slightly exceed the drawdown requirements. CBBEL can support these variance requests.

2.0 Stormwater Quantity

1. The applicant must obtain approval from the city of West Lafayette Engineer's Office for the proposed stormwater management plan.
2. The applicant must provide written approval from the adjoining land owner for all proposed offsite work with Phase 1 and Phase 2.
3. The applicant will need to continue to work with the Tippecanoe County Surveyor for approval of a design to convey offsite runoff from the east to the Dempsey-Baker Regulated Drain prior to final approval. The current design with a proposed 24" storm sewer connection to the existing Dempsey-Baker Tile Drain will not be approved at this time until further documentation is provided and reviewed which supports the design.
4. The applicant should provide an emergency flood routing plan for Phase 1 of the project, including off-site and on-site areas, showing that no adverse impacts to the site or adjoining properties will occur and that the plan meets the requirements of Chapter 4, Section M of the Technical Standards.
5. A complete and comprehensive drainage report with all updated modeling and schematics should be provided and certified.
6. Profile Sheet 27 should be revised to include Structure 384 and elevation information, and revise 392 to remove "Street B" and add ST-10.
7. The swale details on Sheet 39 should be revised to remove the 6" SSD for details A1, B1, and C1 on the grading plans. A typical swale detail with the one section of SSD should be added to the plans.
8. The final plans are to be certified.

3.0 Stormwater Quality

1. The applicant should submit a signed and dated copy of the Notice of Intent (N.O.I.) and copy of the Proof of Publication.
2. Provide a revised stormwater quality model verifying the flow rate for sizing the Stormceptor Unit. The applicant should provide documentation that the 100-year flow rate of 1.8 cfs through the water quality line will not re-suspend material in the SWQU to allow the unit to be placed in-line as shown on the plans. If re-suspension would occur with the noted flow rate, the SWQU will have to be placed off-line.

4.0 General Conditions

1. The applicant must present the project at the Tippecanoe County Drainage Board meeting for the project to be considered for approval.
2. Final construction plans shall be signed by the Tippecanoe County Surveyor. The number of plan sets to be signed will be determined by the Tippecanoe County Surveyor's Office.

3. No site work of any type shall start on this project without a pre-construction meeting with the Tippecanoe County Surveyor's Office.
4. The applicant must pay any final drainage review fees per Ordinance 2011-27-CM and pay the Phase II stormwater program fees.
5. The applicant must provide proof to the Tippecanoe County Surveyor's Office (TCSO), of the formation of a Homeowners Association (HOA), which will assess sufficient funds for the inspection and maintenance of all drainage facilities. An estimate of the needed annual assessment for maintenance and inspection of the drainage facilities must also be provided to the TCSO. In addition, a yearly report must be submitted to the TCSO to show that the HOA is still active and to report the amount of assessments collected.
6. The applicant must provide recorded copies of restrictive covenants satisfactory to the Tippecanoe County Drainage Board and the Tippecanoe County Surveyor's Office
7. If no assurance is required under the Unified Subdivision Ordinance, Section 4.1, the Comprehensive Stormwater Management Ordinance of Tippecanoe County (Ordinance) still requires an assurance, made out to the Tippecanoe County Drainage Board, for an amount equal to 100% of the total costs of implementing measures required by Chapters 3, 4, and 5 of the Ordinance. See Chapter 6, Section 7 of the Ordinance for more information.
8. The property owner, developer, or contractor shall be required to file a three-year maintenance bond or other acceptable guarantee with the Tippecanoe County Drainage Board, prior to final approval, in an amount not to exceed ten percent (10%) of the cost of the stormwater drainage system located outside the public road right-of-ways. See Chapter 6, Section 9 of the Ordinance for more information.
9. The applicant must submit digital copies of both the Final Construction Plans and Final As-Built Plans.
10. All listed issues must be completely addressed before final plan approval and sign-off will be granted by the County Surveyor's Office.

No error or omission in either the plans, calculations or applications (whether said plans, calculations or applications have been reviewed by the review engineer or not) shall permit or release the applicant and designer from constructing this work in any other manner than that provided for in the County Ordinance.

pc: TBIRD Design Services Corporation.
Michael Susong, P.E. – City of West Lafayette

DWE/sb
M02-038NG2.DOC